



## Continued Increase of Gonorrhea Transmission in Montana

Gonorrhea is a sexually-transmitted disease (STD) caused by infection with the bacterium *Neisseria gonorrhoeae*. Gonorrhea is the second most common notifiable disease in the United States and fourth most common reportable disease in Montana. In females, gonorrhea can lead to pelvic inflammatory disease (PID), which can result in infertility, ectopic pregnancy, and chronic pelvic pain. Infection with *N. gonorrhoeae* can also facilitate the sexual transmission of other organisms, such as HIV and *Treponema pallidum*. In 2014, 433 cases of gonorrhea were reported in Montana compared with an average of 121 cases each year during 2000–13. At the time of printing, over 240 cases have already been reported in 2015. Timely detection of *N. gonorrhoeae* infection and treatment along with identification, testing, and treatment of sexual contacts is essential to interrupt disease transmission.

In this issue of *Montana Public Health*, we summarize recent gonorrhea trends in Montana and provide recommendations for screening (Figure 1), treatment (Figure 3), and conducting public health investigations.

### Gonorrhea Trends

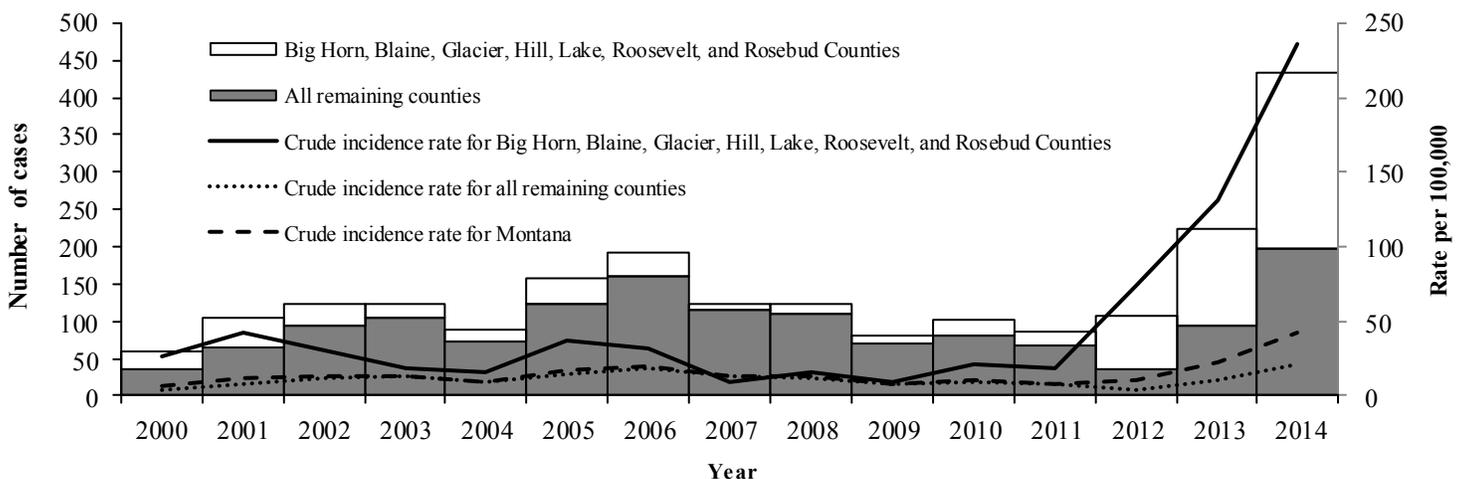
Since 2011, the number of reported gonorrhea cases in Montana increased each year. The number of reported cases increased each year among the 7 counties most closely associated with American Indian Reservations (i.e., Big Horn, Blaine, Glacier, Hill, Lake, Roosevelt, and Rosebud Counties) since 2011 and among the remaining counties since 2012 (Figure 2).

In 2014, the incidence rate in counties associated with American Indian Reservations increased to over 236 cases per 100,000 population, nearly 11-times the rate of all remaining counties in Montana and approximately double the 2013 U.S. gonorrhea rate of 106 cases per 100,000 population. Recent gonorrhea outbreaks in Big Horn, Glacier, and Roosevelt Counties contributed to this increase. During 2010–14, 516 (54%) cases occurred among females and the median age category was 20–24 years.

**Figure 1.** Gonorrhea screening recommendations

- Screen pregnant and non-pregnant sexually-active females at increased risk of gonorrhea (e.g., persons living in areas of increased gonorrhea transmission, new or multiple sex partners, risky sexual practices, other STDs)
- For males, only those who are sexually-active and symptomatic, or asymptomatic and living in areas of increased gonorrhea transmission, should be tested for *N. gonorrhoeae* infection
- Endocervical, vaginal, urethral (men only), or urine specimens can be tested for presence of *N. gonorrhoeae* infection
- Culture, nucleic acid hybridization tests, and nucleic acid amplification tests (NAATs) can be used for testing
- *Symptomatic males only:* Gram stain of a male urethral specimen that demonstrates polymorphonuclear leukocytes with intracellular Gram-negative diplococci is considered diagnostic for *N. gonorrhoeae* infection

**Figure 2.** Number of reported gonorrhea cases and crude incidence rate\* for the seven counties most closely associated with American Indian Reservations and all remaining counties, Montana, 2000–2014



\*2014 incidence rates calculated using 2013 U.S. Census data

**Figure 3.** Treatment recommendations for uncomplicated gonorrhea of the cervix, urethra, and rectum

#### Recommended regimen

- Ceftriaxone 250 mg in a single intramuscular dose  
*PLUS*
- Azithromycin 1 gram orally in a single dose **OR**  
doxycycline 100 mg orally twice daily for 7 days

**NOTE:** No additional testing (test-of-cure) required unless symptoms persist — then use culture-based testing

#### Alternative regimens

If ceftriaxone not available:

- Cefixime 400 mg in a single oral dose  
*PLUS*
- Azithromycin 1 gram orally in a single dose (preferred) **OR**  
doxycycline 100 mg orally twice daily for 7 days

*PLUS*

- Test-of-cure in 1 week

**NOTE:** if the patient has a severe cephalosporin allergy, use azithromycin 2 grams in a single oral dose **PLUS** test-of-cure in 1 week

#### Public Health Investigation

Public health investigations leading to the timely identification, testing, and treatment of sexual contacts of gonorrhea cases are essential to limiting spread of gonorrhea in a community.

Therefore, **healthcare providers must immediately report any case of gonorrhea to their local or tribal health department** as required by the Administrative Rules of Montana (ARM) 37.114.203.

Once a gonorrhea case is reported, public health authorities will interview the patient and identify any recent sexual contacts. All recent identified sexual contacts will be examined, tested, and treated. **It is important each sexual contact is tested for infection as this practice can help identify other infected persons who require treatment.**

Patients diagnosed with gonorrhea must be counseled to abstain from sex until antibiotic treatment is completed. To avoid re-infection, patients should abstain from sex with recent sexual contacts until those persons have completed treatment.

In addition, the case should be counseled to use condoms, avoid risky sexual practices including having sex with multiple partners, and engaging in anonymous sex.

#### Recommendations for Healthcare Providers

- Test all persons at high-risk for *Neisseria gonorrhoeae* infection (see **Figure 1** for screening recommendations)
- Test all persons diagnosed with gonorrhea for other STDs, including chlamydia, syphilis, and HIV
- Use the preferred treatment regimen for gonorrhea — ceftriaxone 250 mg in a single intramuscular dose *PLUS* azithromycin 1 gram orally in a single dose (see **Figure 3** for alternative regimens)
- Immediately report any case of gonorrhea to the local or tribal health department (Administrative rules of Montana 37.114.203)
- Identify, examine, and test sexual contacts to gonorrhea cases per Administrative Rules of Montana
- Please click on the following link to take a short survey <https://www.surveymonkey.com/s/GonorrheaTreatmentGuidelines>

For more information, contact the HIV/STD Section at 406-444-3565

#### References

1. Kidd S. Gonococcal infections. In: Heyman DL, ed. Control of Communicable Diseases Manual, 2nd Edition. Washington D.C.; 2015. 237–42.
2. Centers for Disease Control and Prevention (CDC). Sexually transmitted diseases treatment guidelines, 2010. MMWR 2010;59(No. RR-12):1–110.
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